

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-39. (cancelled)

40. (previously presented) A purified polypeptide comprising the amino acid sequence of SEQ ID NO:5.

41. (previously presented) The purified polypeptide of claim 40 wherein said polypeptide is recombinantly produced.

42-44. (cancelled)

45. (currently amended) A purified polypeptide comprising at least ten contiguous amino acids of the amino acid sequence of SEQ ID NO:5, wherein said polypeptide includes at least one of the amino acid sequences selected from the group consisting of SEQ ID NO:9, SEQ ID NO:10, and six contiguous asparagine residues, ~~which polypeptide is immunologically identifiable by an antibody which reacts specifically with *Helicobacter pylori* CAI antigen.~~

Handwritten notes: 9, 12, 5, 6, No dual support, 12/1/03, Dec.

46. (cancelled)

47. (currently amended) The polypeptide of claim 45 which comprises at least fifteen contiguous amino acids of the amino acid sequence of SEQ ID NO:5.

48-53. (cancelled)

54. (currently amended) An immunogenic composition comprising an immunologically effective amount of a recombinant polypeptide, which recombinant polypeptide: (i) comprises at least ten contiguous amino acids of the amino acid sequence of

SEQ ID NO:5, wherein said polypeptide includes at least one of the amino acid sequences selected from the group consisting of SEQ ID NO:9, SEQ ID NO:10, and six contiguous asparagine residues, and (ii) ~~is immunologically identifiable by an antibody which reacts specifically with *Helicobacter pylori* CAI antigen.~~

61
cont
55. (cancelled)

56. (currently amended) The immunogenic composition of claim 54 wherein said polypeptide comprises at least fifteen contiguous amino acids of the amino acid sequence of SEQ ID NO:5. x

57. (currently amended) The immunogenic composition of claim 54 further comprising an immunologically effective amount of a second polypeptide, which second polypeptide: (i) comprises at least ten contiguous amino acids of *Helicobacter pylori* heat shock protein having the amino acid sequence of SEQ ID NO:6, and (ii) ~~is immunologically identifiable by an antibody which reacts specifically with *Helicobacter pylori* heat shock protein.~~ C

58. (cancelled)

59. (currently amended) The immunogenic composition of claim 57 wherein said second polypeptide comprises at least fifteen contiguous amino acids of the *Helicobacter pylori* heat shock protein having the amino acid sequence of SEQ ID NO:6. C

60-61. (cancelled)

62. (currently amended) A method of preparing an immunogenic composition comprising bringing into association:

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(1) an immunologically effective amount of a purified polypeptide, which polypeptide: ~~(i)~~ comprises at least ten contiguous amino acids of the amino acid sequence of SEQ ID NO:5, wherein said polypeptide includes at least one of the amino acid sequences selected from the group consisting of SEQ ID NO:9, SEQ ID NO:10, and six contiguous asparagine residues, ~~and (ii) is immunologically identifiable by an antibody which reacts specifically with *Helicobacter pylori* CAI antigen, and~~

(2) a pharmaceutically acceptable carrier.

63. (currently amended) The method of claim 62 ~~or 78~~ further comprising adding an immunologically effective amount of a second polypeptide, which second polypeptide: ~~(i)~~ comprises at least ten contiguous amino acids of *Helicobacter pylori* heat shock protein having the amino acid sequence of SEQ ID NO:6, ~~and (ii) is immunologically identifiable by an antibody which reacts specifically with *Helicobacter pylori* heat shock protein.~~

64-67. (cancelled)

68. (previously presented) The purified polypeptide of claim 45, wherein said polypeptide is recombinantly produced.

69. (cancelled)

70. (currently amended) The immunogenic composition of claim 54, further comprising an immunologically effective amount of a second polypeptide, wherein said

second polypeptide:-(i) comprises at least ten contiguous amino acids of *Helicobacter pylori* cytotoxin (CT) protein having the amino acid sequence of SEQ ID NO:3, and (ii) is immunologically identifiable by an antibody which reacts specifically with *Helicobacter pylori* cytotoxin.

71-75. (cancelled)

76. (currently amended) The polypeptide of claim ~~75~~ 47 which comprises at least fifteen contiguous amino acids of the amino acid sequence of SEQ ID NO:5.

not broader
limiting

77. (cancelled)

78. (currently amended) A method of preparing an immunogenic composition comprising bringing into association:

(1) an immunologically effective amount of a recombinant polypeptide, which recombinant polypeptide:-(i) comprises at least ten contiguous amino acids of the amino acid sequence of SEQ ID NO:5, wherein said polypeptide includes at least one of the amino acid sequences selected from the group consisting of SEQ ID NO:9, SEQ ID NO:10, and six contiguous asparagine residues, and (ii) is immunologically identifiable by an antibody which reacts specifically with *Helicobacter pylori* CAI antigen, and

(2) a pharmaceutically acceptable carrier.

79. (cancelled)

80. (currently amended) The immunogenic composition of claim 70 wherein said second polypeptide comprises at least fifteen contiguous amino acids of the *Helicobacter pylori* CT protein having the amino acid sequence of SEQ ID NO:3.

81. (currently amended) An isolated immunogenic polypeptide comprising at least five contiguous amino acids from the *Helicobacter pylori* cytotoxin associated immunodominant (CAI) antigen having the amino acid sequence of SEQ ID NO:5, wherein said polypeptide includes at least one of the amino acid sequences selected from the group consisting of SEQ ID NO:9, SEQ ID NO:10, and six contiguous asparagine residues, wherein said polypeptide is immunologically identifiable by an antibody which reacts specifically with *Helicobacter pylori* CAI antigen.

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cont.

82-87. (cancelled)

88. (currently amended) The polypeptide of claim 84 81, wherein said polypeptide is a recombinant polypeptide.

89-92. (cancelled)

93. (currently amended) The polypeptide of claim 81, said polypeptide comprising at least five contiguous amino acids from amino acids ~~707-937~~ 748-977 of the amino acid sequence of SEQ ID NO:5.

94-122. (cancelled)

123. (currently amended) An isolated immunogenic polypeptide encoded by at least fifteen contiguous nucleotides of the nucleotide sequence of SEQ ID NO:4.

124. (currently amended) An isolated immunogenic polypeptide encoded by at least thirty contiguous nucleotides of the nucleotide sequence of SEQ ID NO:4.

125. (currently amended) An isolated immunogenic polypeptide encoded by at least forty-five contiguous nucleotides of the nucleotide sequence of SEQ ID NO:4.

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Cont.
126. (currently amended) The polypeptide of claim 123, 124, or 125, said polypeptide comprising *Helicobacter pylori* cytotoxin associated immunodominant (CAI) antigen having the amino acid sequence of SEQ ID NO:5, an immunogenic fragment of *Helicobacter pylori* CAI antigen, or an immunogenic derivative of *Helicobacter pylori* CAI antigen.

127. (previously presented) The polypeptide of claim 123, said polypeptide encoded by the polynucleotide sequence of SEQ ID NO:4.

128. (previously presented) The polypeptide of claim 126, wherein said polypeptide is a recombinant polypeptide.

129. (cancelled)

130. (currently amended) The polypeptide of claim 123, said polypeptide encoded by at least fifteen contiguous nucleotides of nucleotide positions ~~2772-3466~~ 2776-3466 of the nucleotide sequence of SEQ ID NO:4.

131-139. (cancelled)

140. (new) The method of claim 78 further comprising adding an immunologically effective amount of a second polypeptide, which second polypeptide comprises at least ten

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PATENT

contiguous amino acids of *Helicobacter pylori* heat shock protein having the amino acid
sequence of SEQ ID NO:6.

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Conclude